# AFSC 1A3X1 AIRBORNE MISSION SYSTEMS



# CAREER FIELD EDUCATION AND TRAINING PLAN (CFETP)

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# CAREER FIELD EDUCATION AND TRAINING PLAN AIRBORNE MISSION SYSTEMS AFSC 1A3X1

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# **PART I**

### Preface

- 1. This Career Field Education and Training Plan (CFETP) is a comprehensive education and training document that identifies life-cycle education/training requirements, training support resources. The CFETP will provide personnel a clear career path to success and instill rigor in all aspects of career field training.
- **2.** The CFETP consists of two parts; both of which are used by management to plan, manage, and control training within the career field.
- 2.1. Part I provides information necessary for overall management of the specialty. Section A explains how everyone will use the plan; Section B identifies career progression information, duties and responsibilities, training strategies, and career field path; Section C associates each level with specialty qualifications (knowledge, education, training, and other); Section D indicates resource constraints. Some examples are funds, manpower, equipment, and facilities. Note: The *Air Force Enlisted Classification Directory* (AFECD) contains the specialty descriptions.
- 2.2. Part II includes the following: Section A identifies the Specialty Training Standard (STS) and includes duties, tasks, technical references to support training, Air Education and Training Command (AETC) conducted training, and correspondence course requirements. Section B contains the course objective list and training standards supervisors will use to determine if airmen satisfied training requirements. Section C identifies available training support materials. Section D identifies a training course index that is used to determine resources available to support training. Included here are both mandatory and optional courses. Section E identifies MAJCOM unique training requirements.
- **3.** This CFETP is designed to ensure individuals in AFSC 1A3XX receive comprehensive and effective training at the appropriate phases of their career. At unit level, supervisors and trainers use Part II to identify, plan, and conduct training commensurate with the overall goals of this plan.

### ABBREVIATIONS/TERMS EXPLAINED

**Advanced Training.** Formal course which provides individuals who are qualified in one or more positions of their Air Force Specialty (AFS) with additional skills/knowledge to enhance their expertise in the career field. Training is for selected career airmen at the advanced level of the AFS.

**Aircrew Fundamentals Course (AFC).** A course designed to screen candidates for the rigors of enlisted aircrew duties prior to spending expensive follow-on training resources.

**Air Force Career Field Manager (AFCFM).** Individual appointed by Air Staff Deputy Chief of Staff to manage education, training, and resources for a specific career field(s).

**Basic Aircraft Qualification (BAQ).** An aircrew member who has satisfactorily completed initial qualification training and is qualified to perform aircrew duties in the unit aircraft.

**Basic Mission Capable (BMC).** An aircrew member who has satisfactorily completed mission qualification training, does not maintain MR/CMR status, but maintains familiarization in the command or unit operational mission.

**Career Development Course (CDC).** A self-paced course designed to upgrade a skill level and provide the information necessary to satisfy the career knowledge component of OJT. They contain information on basic principles, techniques, and procedures common to an AFSC.

**Career Enlisted Aviator (CEA).** An individual with a primary AFSC of 1AXXX (Aircrew Operations).

Career Field Education and Training Plan (CFETP). A CFETP is a comprehensive, multipurpose document encapsulating the entire spectrum of training for a specialty. It outlines a logical growth path, including training resources, and is designed to eliminate duplication and make training identifiable and budget defensible.

**Center of Excellence (CoE).** The cornerstone of all career enlisted aviator training, conducted at Lackland AFB, TX. Provides undergraduate and initial skills training through the award of the 3-skill level.

Combat Mission Ready (CMR). An aircrew member who has satisfactorily completed mission qualification training and maintains qualification and proficiency in the command or unit combat mission.

Continuation Training (CT). Training for aircrew members already qualified in their respective aircrew position to maintain their assigned level of proficiency. CT is designed to progressively improve basic aircraft qualification, combat mission ready, basic mission capable, and aircrew members' ability to perform the unit's mission.

**Course Objective Lists (COL).** A publication, derived from the initial skills course training standard, identifying the tasks and knowledge requirements, and respective standards provided to achieve a 3-skill level in this career field. Supervisors use the COL to conduct graduate evaluations in accordance with AFI 36-2201, Volume 3, Air Force Training Program On-the-Job Training Administration.

**Course Training Standard (CTS).** A training standard identifying the training members will receive in a specific course.

**Crew Resource Management (CRM).** The effective use of all available resources—people, weapon systems, facilities and equipment, and environment—by individuals or crews to safely and efficiently accomplish an assigned mission or task. The term "CRM" is used to refer to the training program, objectives, and key skills directed to this end.

**Enlisted Specialty Training (EST).** A mix of formal training (technical school) and informal training (on-the-job) to qualify and upgrade airmen in each skill-level of a specialty.

**Exportable Training.** Additional training via computer assisted, paper text, interactive video, or other necessary means to supplement training.

**Initial Qualification Training (IQT).** Training necessary to initially qualify a crewmember in a basic crew position and flying duties without regard to the unit's operational mission. This is the minimum requirement for BAQ.

Initial Skills Training. A formal school course that results in award of a 3-skill level AFSC.

**Instructional System Development (ISD).** A deliberate and orderly, but flexible process for planning, developing, validating, implementing, and reviewing instructional programs. It ensures personnel are taught, in a cost efficient way, the knowledge and skills for successful job performance.

**Lead Command.** The lead command for this specialty is ACC. They establish standards, tasks, and formal training requirements for both operations and maintenance, and are responsible for updating training requirements and coordinating changes to the CFETP.

**MAJCOM Functional Manager (MFM).** Primary focal point and liaison between the MAJCOM and HQ USAF on all matters relating to the aircrew career fields and aviation resource management within the command. This includes, but is not limited to, responsibility for the aircrew training programs, coordination on aircrew resource allocations, and managing education, training, and resources for a specific career field(s) for that MAJCOM.

**Major Weapons Systems (MWS).** For the purpose of this CFETP, MWS consists of all applicable airborne platforms with a crew complement including at least one 1A3XX.

**Mission Capable (MC).** Status of an aircrew member who has satisfactorily completed mission qualification training but who does not maintain mission ready status.

**Mission Design Series (MDS).** A term used to identify a specific aircraft designation (e.g., EC-130J, E-3B).

**Mission Ready (MR).** An aircrew member who has satisfactorily completed mission qualification training and maintains qualification and proficiency in the command or unit operational mission.

**Mission Qualification Training (MQT).** Training necessary to qualify a crewmember in a specific aircrew position to perform the command's or unit's operational mission. MQT completion is a prerequisite for mission ready status.

**On-the-Job Training (OJT).** A delivery method used to certify personnel in both upgrade (skill level award) and job qualification (duty position certification) training. It is hands-on, over-the-shoulder training conducted at the duty location.

**Practicum**. A means of receiving college credits through Community College of the Air Force (CCAF) Teaching Technology Associates Degree Program for formal schoolhouse instructors. It covers a wide variety of subjects beyond initial instructor qualification.

**Qualification Training (QT).** Actual hands-on task performance training designed to qualify an aircrew member in a specific duty position. This training program occurs both during and after the upgrade training process. It is designed to provide the performance skill/knowledge training required to do a job.

**Resource Constraints.** Resource deficiencies, such as money, facilities, time, manpower, and equipment that preclude desired training from being accomplished.

**Specialty Training Standard (STS).** An Air Force publication that describes an Air Force Specialty in terms of tasks and knowledge, which an airman in that specialty may be expected to perform or to know on the job. It further serves as a contract between AETC and the functional user. It shows which of the overall training requirements for an AFSC are taught in formal schools and exportable courses.

**Standard.** An exact value, a physical entity, or an abstract concept, established and defined by authority, custom, or common consent to serve as a reference, model, or rule in measuring quantities or qualities, establishing practices or procedures, or evaluating results. A fixed quantity or quality.

**Total Force.** All collective Air Force components (active, reserve, guard, and civilian elements) of the United States Air Force.

**Upgrade Training (UGT).** Training that leads to the award of a higher skill level in an Air Force Specialty.

**Utilization and Training Workshop (U&TW).** A forum of the AFCFM, MAJCOM functional managers (MFM), Subject Matter Experts (SME), and AETC training personnel that determines career field training requirements.

Weapons System Training Package (WSTP). An instructional course which includes IQT, MQT, and CT designed for use at the unit to qualify or aid qualification in a duty position, program, or on a piece of equipment. The WSTP may be printed, computer based, flying, simulator, or other audiovisual material.

# **Section A - General Information**

- 1. Purpose. This CFETP provides information necessary for the Air Force Career Field Manager (AFCFM), MAJCOM functional managers (MFMs), commanders, training managers, supervisors, and trainers to plan, develop, manage, and conduct an effective and efficient career field training program. The plan outlines the training that individuals must receive in order to develop and progress throughout their career. For the purpose of this plan, training is divided into four areas: initial skills, upgrade training (UGT), qualification training (QT), and continuation training (CT). Initial skills training is the Air Force Specialty specific training an individual receives upon entry into the Air Force or upon retraining into this specialty for award of the 3-skill level. Upgrade training identifies the mandatory courses, task qualification requirements, and correspondence course completion required for award of the 5-, 7-, and 9-skill levels. Qualification training is actual hands-on task performance training designed to qualify an airman in a specific duty position. This training program occurs both during and after the upgrade training process. It is designed to provide the performance skills/knowledge training required for the job. Continuation training is additional training either in-residence or exportable advanced training courses, or on-the-job training, provided to personnel to maintain their skills and knowledge beyond the minimum required. The CFETP has several purposes, some are:
- 1.1. Serves as a management tool to plan, manage, conduct, and evaluate a career field training program. Also, it is used to help supervisors identify training at the appropriate point in an individual's career.
- 1.2. Identifies task and knowledge training requirements for each skill level in this specialty and recommends training and education throughout each phase of an individual's career.
- 1.3. Lists training courses available in the specialty, identifies sources of training, and the training medium.
- 1.4. Identifies major resource constraints that impact full implementation of the desired specialty training program.
- **2. Uses.** The CFETP will be used by MFMs and supervisors at all levels to ensure comprehensive and cohesive training programs are available and/or instituted for each individual in the specialty.
- 2.1. Training personnel will develop and revise formal resident, non-resident, and exportable training based on requirements established by the user and documented in Part II of the CFETP. The lead command MFM will work with the AFCFM to develop acquisition strategies for obtaining resources needed to provide the identified training.
- 2.2. MFMs will ensure their training programs complement the CFETP mandatory initial and upgrade skills requirements. Identified requirements can be satisfied by OJT, resident training, contract training, or exportable courses. MAJCOM-developed training to support this AFSC must be identified for inclusion in this plan and must not duplicate available training resources.
- 2.3. Each individual will complete the mandatory training requirements specified in this plan. The list of courses in Part II will be used as a reference to support training.
- 2.4. Personnel in AFSC 1AXXX are exempt from maintaining OJT Training Folders (AF Form 623). That training is certified via AF Form 8 by trained evaluators. Certification of the AF Form 8 eliminates the requirement to document STS items in this CFETP.
- **3. Coordination and Approval.** The AFCFM is approval authority. Also, the AFCFM will initiate an annual review of this document to ensure currency and accuracy. MAJCOM functional managers and AETC training managers will identify and coordinate on the career field training requirements. Using the list of courses in Part II, they will eliminate duplicate training. Send applicable inputs/changes to this CFETP through MAJCOM functional managers to HQ USAF/A3O-AT, 1480 Air Force Pentagon, Washington D.C. 20330-1480.

# Section B - Career Progression and Information

### 4. Specialty Description

4.1. **Specialty Summary.** Performs aircrew duties on numerous airborne platforms. Operates, maintains, repairs, and tests airborne communications, sensor, computer, and electronic systems. Performs preflight, in-flight, and postflight duties. Supervises, instructs, and evaluates personnel in operation, maintenance, repair, and test procedures. Establishes, manages and supervises airborne mission system operation and directs aircrew training.

### 4.2. Duties and Responsibilities.

- 4.2.1. Inspects and operates airborne communications, sensors, computers, and electronic systems. Plans, organizes, and coordinates mission activities and materials. Determines aircraft status and coordinates link establishment and network connectivity information. Performs preflight, in-flight, and postflight inspections. Performs initial power-on and testing of airborne communications, sensors, computers, and electronic systems. Establishes and maintains voice and data communications circuits/links. Repairs and maintains airborne communications, sensors, computers, and electronic systems. Operates aircraft emergency systems and equipment.
- 4.2.2. Performs and supervises airborne equipment operations and maintenance. Initializes, operates, monitors, tests, troubleshoots, isolates malfunctions, and repairs radio, audio distribution, switching, data, cryptologic, anti-jam, satellite communications, radar, identification friend or foe, recording and playback, multiplex, electronic warfare (EW), intercept, analysis, recording, broadcasting, imaging, computer, and network equipment (including ancillary equipment). Monitors displays and indicators for equipment status using technical orders and manuals, test equipment, software diagnostics, voltage checks, resistance measurements, waveform observations, or other tests. Installs, operates, and monitors special support systems. Performs aircraft exterior scanner duties. Monitors aircraft engine, propeller, hydraulic, pneumatic and flight controls systems during engine start. Adheres to communication security (COMSEC) procedures.
- 4.2.3. Establishes, supervises, and directs aircrew training. Develops and directs instruction in equipment operation and troubleshooting. Ensures standardized procedures are used to teach inflight equipment operation, maintenance, and repair. Determines need for specific instruction, and establishes training programs on airborne systems.
- 4.2.4. Evaluates airborne systems operation and maintenance activities. Evaluates compliance with technical manuals, regulations, and work standards. Serves on or directs airborne systems inspection teams to evaluate in-flight maintenance and operational programs. Interprets inspection reports and prescribes corrective actions.
- 4.2.5. Manages operation and maintenance functions. Maintains operational inspection and maintenance records and documents. Reviews unusual and difficult problems in operation and inflight maintenance of equipment. Recommends methods, techniques, and procedures to enhance maintenance and operational capabilities, and improve mission system options. Advises on mission systems operation and maintenance, and coordinates on research and development projects.
- 5. Skill/Career Progression. Adequate training and timely progression from the apprentice to the superintendent skill level play an extremely important role in the Air Force's ability to accomplish its mission. Therefore, it is essential that everyone involved in training do their part to plan, develop, manage, conduct, and evaluate an effective and efficient training program. The guidance provided in this part of the CFETP will ensure individuals receive viable training at the appropriate points in their career. The following narrative and the AFSC 1A3XX career field flow charts identify the training career path. They define the training required in an individual's career.
- 5.1. **Apprentice 3-Level.** Meeting requirements listed in AFI 36-2101 specialty description, completion of the Aircrew Fundamentals Course (L3AQR1A311 01AA) at Lackland AFB, TX. Initial skills training in this specialty consists of the tasks and knowledge training provided in the 3-skill

level resident course (1A331). Tasks and knowledge training requirements are identified in the specialty training standard, at Part II, Section A. Individuals must complete the initial skills course to be awarded AFSC 1A331.

- 5.2. **Journeyman 5-Level.** Upgrade training to the 5-skill level in this specialty consists of tasks and knowledge training provided in Career Development Course (CDC) 1A351 and minimum 15 months UGT. Individuals in retraining status are subject to the same training requirements and a minimum 9 months in UGT.
- 5.3. **Craftsman 7-Level.** Upgrade training to the 7-skill level in this specialty consists of holding at least the grade of SSgt and 12 months of experience. Individuals in retraining status are subject to the same training requirements and a minimum 6 months in UGT.
- 5.4. **Superintendent 9-Level.** Upgrade training to the 9-skill level in this specialty consists of holding the grade of SMSgt and having supervisor's recommendation.
- **6. Training Decisions.** The CFETP uses a building block approach (simple to complex) to encompass the entire spectrum of training requirements for the Airborne Mission Systems specialty. This CFETP was developed to include life-cycle (day one through retirement) training requirements for this specialty. The spectrum includes a strategy for when, where, and how to meet the training requirements. The strategy must be apparent and affordable to reduce duplication of training and eliminate a disjointed approach to training. The following training decisions were made at the career field U & TW held at the Career Enlisted Aviator Center of Excellence, Lackland AFB, TX in March 2007.
- 6.1. **Initial Skills Training**. Initial physiological training will be conducted at the Aircrew Fundamentals Course. Significant changes were made in initial skills training. The STS was changed to include Aircrew Fundamentals Course to align common core training amongst all 1AXXX AFSCs. The initial skills training will be revised to provide training needed to prepare graduates for Airborne Mission Systems related positions.
- 6.2. **Five Level Upgrade Training.** The Aircrew Fundamentals, 1AX5X, CDC was added as a prerequisite volume prior to starting the AFSC 1A351 CDC. Completion of all CDC sets provides required training for upgrade in the Airborne Mission Systems related positions.
- 6.3. **Seven Level Upgrade Training.** No formal training. The CSAF has approved a variance, eliminating the requirement for in-residence 7-level training for all 1AXXX (Aircrew Operations Career Field) personnel.
- 7. Community College of the Air Force (CCAF) Academic Programs. CCAF provides the opportunity to obtain an Associate in Applied Sciences (AAS) Degree. Enrollment in CCAF occurs upon completion of basic military training. Off-duty education is a personal choice but is highly encouraged. In order to receive Senior Rater Endorsement on the EPR, individuals will obtain a CCAF degree and complete requisite PME. See the CCAF web site for program details regarding the AAS degree at: http://www.au.af.mil/au/ccaf. Additionally, see the Air Force Virtual Education Center website regarding AAS degree progress at: https://my.af.mil/afvecprod/. In addition to its associate degree program, CCAF offers the following:
- 7.1. **Occupational Instructor Certification.** The College offers the Occupational Instructor Certification to instructors teaching full time in a CCAF affiliated school. To qualify, instructors must complete an instructor course, a Teaching Practicum, have two years teaching experience, hold an associate or higher degree, and be recommended by their commander/commandant.
- 7.2. **Instructor of Technology & Military Science Degree.** This program is offered to enlisted members who are assigned to CCAF affiliated schools teaching CCAF degree-applicable courses. Applicants must complete three semester hours of CCAF-approved instructor methodology coursework and hold their career-field-related CCAF degree or equivalent civilian college degree before registration.

- 7.3. **Trade Skill Certification** When a CCAF student separates or retires, a trade skill certification is awarded for the primary occupational specialty. The College uses a competency based assessment process for trade skill certification at one of four proficiency levels: Apprentice, Journeyman, Craftsman/Supervisor, or Master Craftsman/Manager. All are transcribed on the CCAF transcript.
- 7.4. **Degree Requirements.** All airmen are automatically entered into the CCAF program. The current program associates degree available from the CCAF for AFSC 1A3XX is the Information Systems Technology Associate of Applied Science degree. Prior to completing an associate degree, the 5-skill level must be awarded and the following requirements must be met:

Subject Area	Semester Hrs
Technical Education	24
Leadership, Management, and Military Studies	6
Physical Education	4
General Education	15
Program Elective	15
Total	64

7.4.1. **Technical Education (24 Semester Hours):** Twenty-four semester hours are required to fulfill the technical education requirement. A minimum of 12 semester hours of technical core subjects or courses must be applied and the remaining semester hours applied from technical core or technical elective subjects or courses. Requests to substitute comparable courses or to exceed specified semester hour values in any subject or course must be approved in advance by the Technical Branch at CCAF.

## 7.4.1.1. Technical Core (12-24 Semester Hours):

Subjects/Courses	Max Semester Hours
Aerospace Control and Warning Systems	24
CCAF Internship	18
Computer Networking	6
Radio Communications	6
Space Systems Operations	24

### 7.4.1.2. Technical Electives (0-12 Semester Hours):

Subjects/Courses	Max Semester Hours
Astronautics	3
Astronomy	3
Aviation/Flight Safety	
Basic Electronics Theory/Application	6
Computer Science	6
Enlisted Professional Military Education	12
Management Information Systems	3
Programming Languages	6
Solid-State Theory/Application	
Space Propulsion	3
Space Propulsion	3
Technical Writing	3

7.4.2. Leadership, Management, and Military Studies (6 Semester Hours): Professional Military Education and/or civilian management courses. See *CCAF General Catalog* for application of civilian management courses.

- 7.4.3. **Physical Education (4 Semester Hours):** This requirement is satisfied by completion of Basic Military Training.
- 7.4.4. **General Education (15 Semester Hours):** Applicable courses must meet the criteria for application of courses to the General Education Requirement (GER) and be in agreement with the definitions of applicable General Education subject/courses as provided in the CCAF general catalog.

Subject/Courses	<b>Semester Hours</b>
Oral Communication (speech)	3
Written Communication (English composition)	
Mathematics (intermediate algebra or college-level mathematics)	3
Social Science (anthropology, archaeology, economics, geography,	
government, history, political science, psychology, sociology)	3
Humanities (courses in fine arts (criticism, appreciation, historical	
significance, foreign language, literature, philosophy, religion)	3

- 7.4.5. **Program Elective (15 Semester Hours):** Satisfied with applicable Technical Education, Leadership, Management, and Military Studies or General Education subjects/courses.
- 7.5. Additional off-duty education is a personal choice that is encouraged for all. Individuals desiring to become an Air Education and Training Command Instructor should be actively pursuing an associate's degree. A degreed faculty is necessary to maintain accreditation through the Southern Association of Colleges and Schools.

### 8. Career Field Flow Charts.

- Figure 1. Enlisted Career Path
- Figure 2. 1A3XX Training Flow
- Figure 3. EC-130 (Compass Call) Training Path
- Figure 4. Special Operations / Rescue (MC-130E/P & HC-130P) Training Path
- Figure 5. E-4B (NAOC) Training Path
- Figure 6. E-3 (AWACS) Training Path
- Figure 7. E-3 (NATO AWACS) Training Path
- Figure 8. Special Air Mission (SAM) Training Path
- Figure 9. Combatant Commander (CoCom) Airlift Training Path
- Figure 10. E-8 (Joint STARS) Training Path
- Figure 11. RC-135V/W Rivet Joint, RC-135U Combat Sent, RC-135S Cobra Ball Training Paths
- Figure 12. EC-130J (Commando Solo) Training Path
- Figure 13. Assignment Locations.

Enlisted Education and Training Path					
Diffision Dancation	GRADE REQUIREMENTS				
Education and Training Requirements	Rank	Earliest Sew-on	Air Force Average	High Year of Tenure (HYT)	
Basic Military Training School (BMTS)	AB				
Apprentice Technical School (3-Skill Level)	Amn	6 months			
Upgrade To Journeyman (5-Skill Level) - Minimum 15 months on-the-job training - Minimum 9 months on-the-job training for retrainees - Complete appropriate CDC	A1C SrA	16 months 28 months	3 years	12 years	
Airman Leadership School (ALS)  - Must be a SrA with 48 months time in service or be a SSgt selectee (ARC: Must be a SrA with 42 months time in service to accomplish ALS by correspondence)  - Resident graduation is a prerequisite for SSgt sew-on (Active Duty Only)					
Upgrade To Craftsman (7-Skill Level) - Minimum rank of SSgt - 12 months OJT - 6 months OJT for retrainees	SSgt	3 years	4.6 years	20 years	
Noncommissioned Officer Academy (NCOA)  - Must be a TSgt or TSgt selectee  - Resident graduation is a prerequisite for MSgt sew-on (Active Duty Only)  - Resident or correspondence graduation is a prerequisite for MSgt sew-on (ARC Only)	TSgt	5 years	10.8 years	24 years	
USAF Senior NCO Academy (SNCOA)  - Must be a CMSgt selectee, SMSgt, SMSgt selectee, or a MSgt selected to attend  - Resident graduation is a prerequisite for CMSgt sew-on (Active Duty Only)  - Resident or correspondence graduation is a prerequisite for SMSgt sew-on (ARC Only)	MSgt	8 years	17 years	26 years	
Upgrade to Superintendent (9-Skill level) - Minimum rank of SMSgt.	SMSgt	11 years	20.5 years	28 years	
Chief Enlisted Manager (CEM)  - Minimum rank of CMSgt  - Completed SNCO Academy (Active Duty Only)  - Chief Leadership Course (CLC)	CMSgt	14 years	22.8 years	30 years	
Data current a	s of April 2	2007	1		

Figure 1

# **1A3X1 Training Flow**

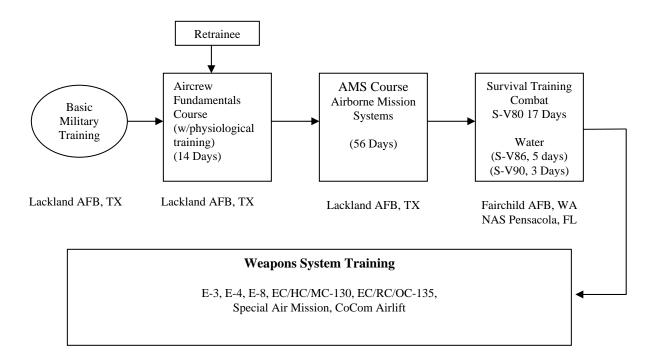


Figure 2

- 8.1. The flow outlined in figure 2 (above) represents the formal training courses required for personnel entering and becoming fully qualified in the AIRBORNE MISSION SYSTEMS SPECIALTY. The locations, course lengths, and titles are subject to change. Changes will be updated in the Education Training Course Announcement by the course owner.
- 8.1.1. The course flow has been developed and agreed upon by the MAJCOM functional managers to minimize days students are awaiting training and to ensure survival training is received prior to AFSC award--minimizing the impact of not having the prerequisites completed before entering weapons system training.
- 8.1.2. Personnel graduating from the Lackland AFB AMSS course are awarded AFSC 1A331 and are allowed to wear the Basic Aircrew Member Badge. Wear and permanent awarding requirements of the Basic Aircrew Member Badge will be IAW AFI 11-402 and MAJCOM supplements. Failure to complete IQT is authority for supervisors to recommend revocation of wear of the aircrew member badge.

# EC-130 Compass Call Training Path

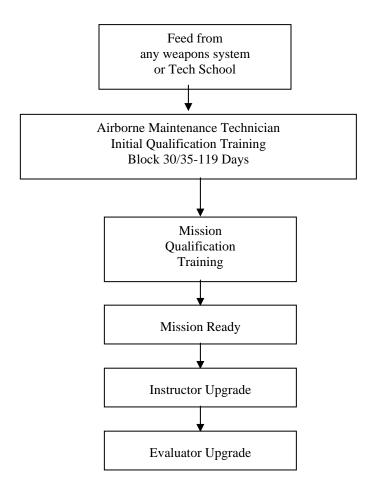


Figure 3

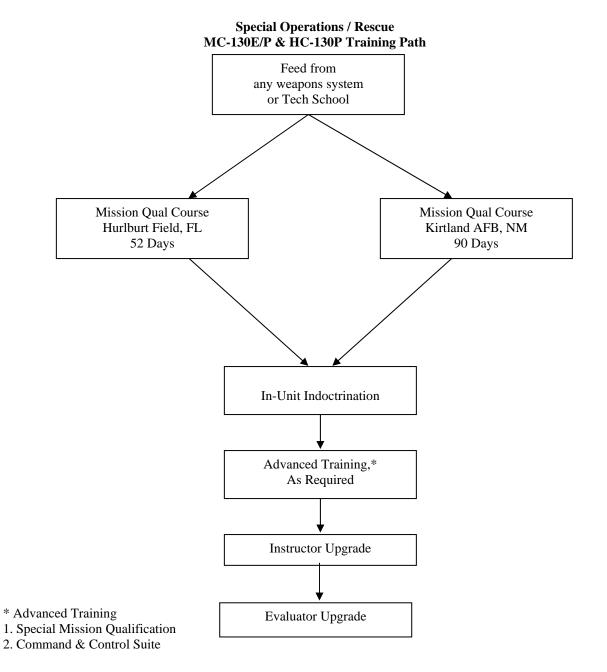


Figure 4

# E-4B (NAOC) Training Path

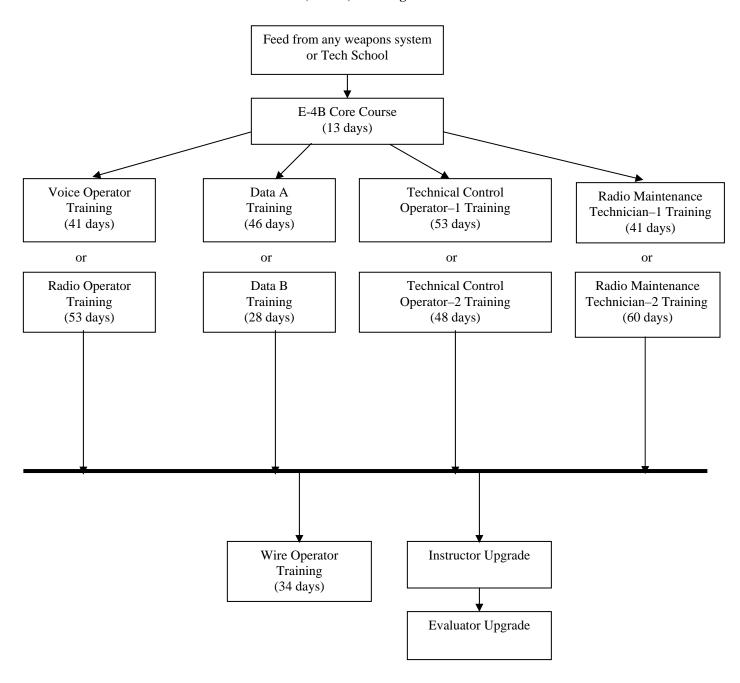


Figure 5

# E-3 (AWACS) Training Paths

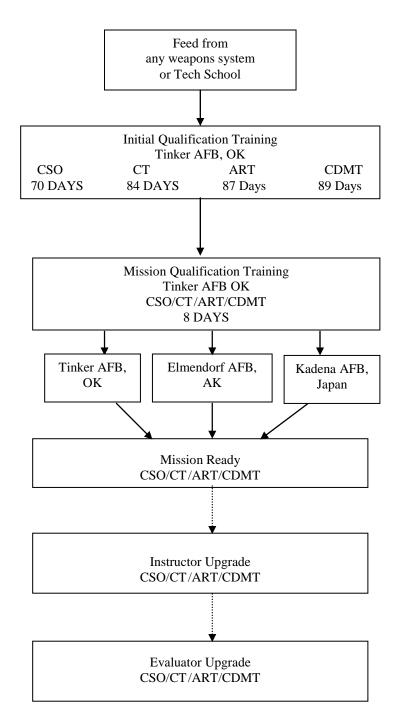


Figure 6

# NATO AWACS

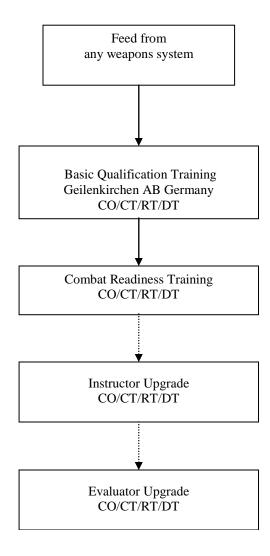


Figure 7

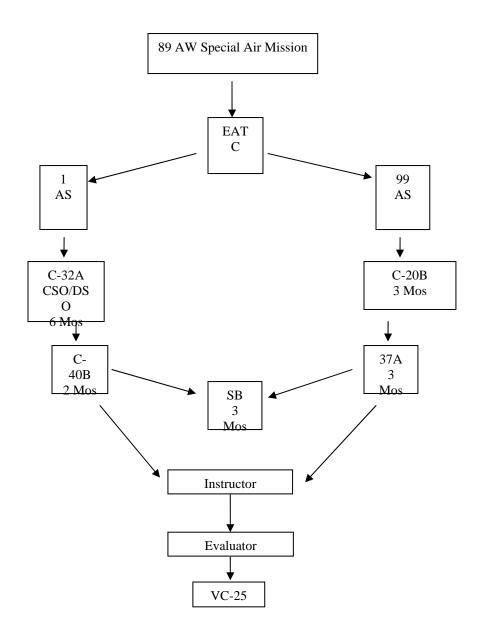


Figure 8

EATC – Executive Airlift Training Center SB – Silver Bullet program CSO/DSO – Comm/Data Systems Operator

# Combatant Commander (CoCom) Airlift Training Path

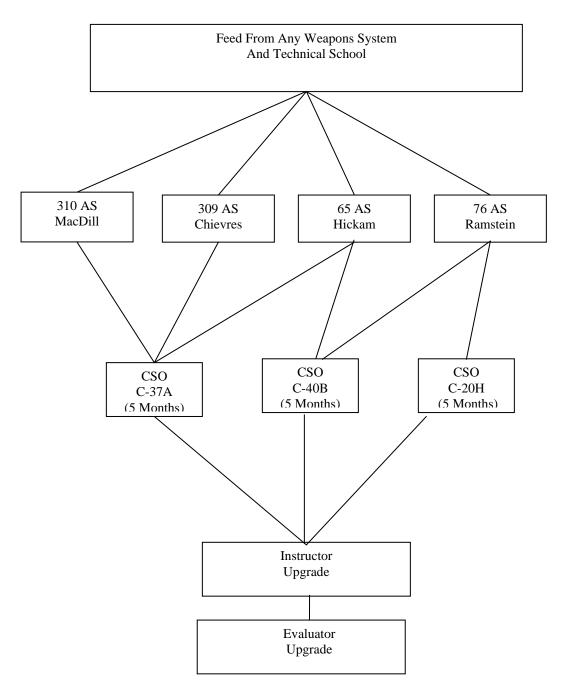


Figure 9

# E-8 (Joint STARS) Training Path



Figure 10

# RC-135V/W Rivet Joint, RC-135U Combat Sent, and RC-135S Cobra Ball Training Paths

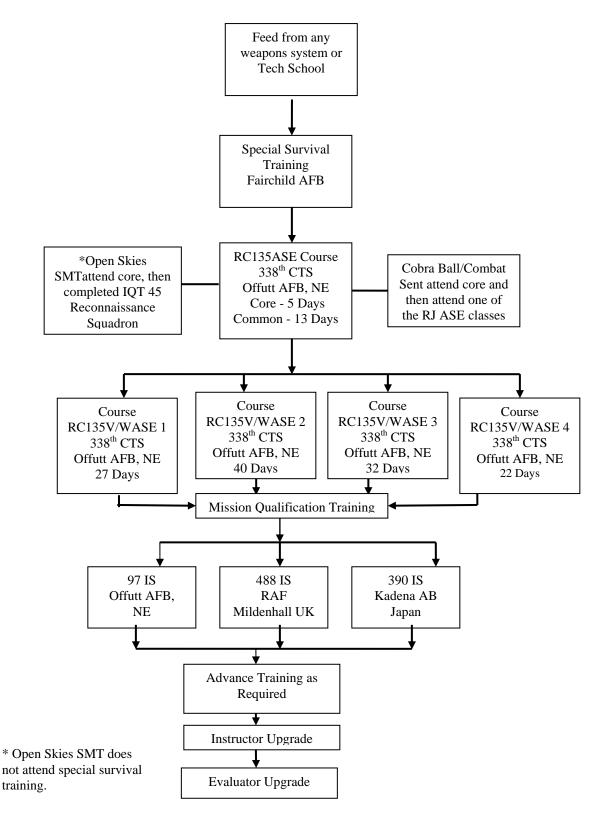


Figure 11

# EC-130J (Commando Solo) Training Path

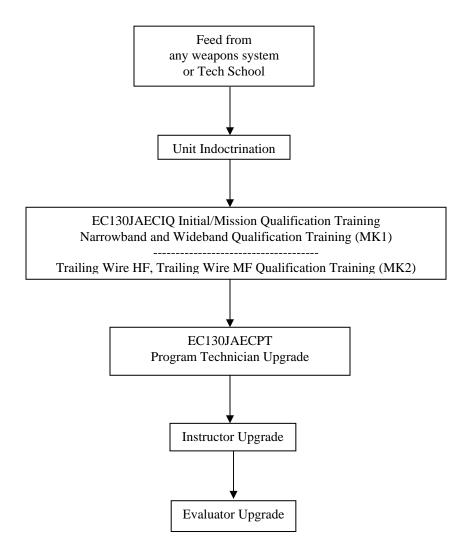


Figure 12

1A3X1 Assignment Locations

Location	CMS	SMS	MSG	TSG	SSG	SRA	A1C	
Anacostia, MD			X					
Andrews AFB, MD	X	X	X	X	X	X	X	
Arlington, VA			X					
Chievres, BE				X	X	X		
Davis-Monthan AFB, AZ	X	X	X	X	X	X	X	
Edwards AFB, CA		X	X	X				
Eglin AFB, FL			X	X	X	X	X	
Elmendorf AFB, AK		X	X	X	X	X	X	
Geilenkirchen AB, GE		X	X	X	X			
Greenville, TX		X	X	X				
Hickam AFB, HI			X	X	X			
Hurlburt Field, FL	X	X	X	X				
Kadena AB, JA	X		X	X	X	X	X	
Kelly AFB, TX			X					
Kirtland AFB, NM			X	X	X	X		
Lackland AFB, TX	X		X	X	X			
Langley AFB, VA	X	X	X					
MacDill AFB, FL			X	X	X			
Melbourne, FL			X	X	X			
Moody AFB, GA		X	X	X	X	X	X	
Offutt AFB, NE	X	X	X	X	X	X	X	
Pentagon			X					
RAF Mildenhall, UK		X	X	X	X	X	X	
Ramstein AB, GE		X	X	X	X	X		
Randolph AFB, TX	X							
Robins AFB, GA	X	X	X	X	X	X	X	
Scott AFB, IL			X					
Seattle, WA			X	X				
Shape, BE			X	X				
Tinker AFB, OK	X	X	X	X	X	X	X	
Waco, TX			X	X	X			
NOTE: Data current as of November 2007.								

Figure 13

NOTE: The authorizations listed above are subject to change without notice. Crewmembers interested in assignments to locations listed should consult their MAJCOM functional manager or the AFPC resource manager for more detailed information about requirements for a specific location.

# Section C - Skill Level Training Requirements

**9. Purpose.** Skill level training requirements in this career field are defined in terms of task and knowledge requirements. This section outlines the specialty qualification requirements for each skill level in broad, general terms and establishes the mandatory requirements for entry, award, and retention of each skill level. The specific task and knowledge training requirements are identified in the STS and the Course Objective List at Part II, Section A and B of this CFETP.

### 10. Specialty Qualifications:

### 10.1. Apprentice Level Training:

### 10.1.1. Specialty Qualification.

- 10.1.1.1. **Knowledge.** Knowledge is mandatory of: electronics, computer, radio, and radar theory including solid-state components, electronic principles, networking, digital techniques, basic software structure, principles of radio frequency (RF) as applied to basic radar, voice and data communication systems, digital data processing; general purpose computers and interface units; interpreting technical orders, schematics, and wiring diagrams, logic diagrams worldwide communications, direction-finding, multiplex, data and voice procedures capabilities, limitations, operations, and functions of electronic test equipment; binary, octal, and hexadecimal numbering systems, mission systems forms and reports software diagnostic routines; and maintaining airborne weapons systems and ancillary systems.
- 10.1.1.2. **Education.** For entry into this specialty, completion of high school is mandatory. Also, courses in physics, computer principles, mathematics, typing, speech, and English is desirable.
- 10.1.1.3. **Training.** The following training is mandatory for the award of the AFSC: Completion of the Aircrew Fundamentals Course (L3AQR1A311 01AB) at Lackland AFB, Texas is mandatory for pipeline and non-aviation service cross training students. Completion of the Airborne Mission Systems (L3ABR1A331) at Lackland AFB, TX is mandatory for award of the 3-skill level AFSC.
- 10.1.1.4. **Other.** The following are mandatory as indicated:
- 10.1.1.4.1. For entry into this specialty, normal color vision and depth perception as defined in AFI 48-123. *Medical Examination and Standard*.
- 10.1.1.4.2. For entry, award, and retention of this AFSC, physical qualification for aircrew duty according to AFI 48-123, *Medical Examination and Standards*.
- 10.1.1.4.3. For entry, award, and retention of AFSC, Qualification for aviation service according to AFI 11-402, *Aviation and Parachutist Service*, *Aeronautical Ratings and Badges*.
- 10.1.1.4.4. For entry, award, and retention of AFSCs 1A311/31/51/71/91, physical qualification for voice communications operations.
- 10.1.1.4.5. For award and retention of AFSCs 1A331/51/71/91/00, eligibility for a Top Secret security clearance according to AFI 31-501, *Personnel Security Management Progra*m.
- 10.1.1.4.6. Completion of SERE Training Course (S-V80) and Water survival Training Course (S-V86 and/or S-V90) is mandatory for all 1A3X1 personnel. Members selected for duty on C-130 require S-V86-A and those members selected for the RC-135 program will also attend S-V83.
- 10.1.1.4.7. Must maintain eligibility to deploy and mobilize worldwide.
- 10.1.2. **Training Sources.** Completion of the Airborne Mission Systems course at Lackland AFB, TX satisfies the knowledge and training requirements specified in the specialty qualification section (above) for award of the 3-skill level. Completion of the Aircrew Fundamentals Course is mandatory.

10.1.3. **Implementation**. Entry into training is accomplished by initial accessions from BMTS or approved retraining from any AFSC. After graduation from (L3ABR1A331), IQT starts when an individual is assigned to their first duty position. Thereafter, upgrade training is initiated anytime an individual is assigned duties they are not qualified to perform.

### 10.2. Journeyman Level Training:

- 10.2.1. **Specialty Qualification.** All qualifications for AFSC 1A331 apply to the 1A351 requirements.
- 10.2.1.1. **Knowledge.** In addition to knowledge required for the 3-level and other qualifications as listed above, an individual must possess the knowledge and skills necessary to operate and maintain Airborne Mission Systems. Completion of qualification criteria in current assigned aircraft is mandatory.
- 10.2.1.2. **Education.** To assume the rank of SSgt, individual must be a graduate of the Airman Leadership School (ALS).
- 10.2.1.3. **Training.** Completion of 1A351 CDCs, 15 months in UGT (9 months for retrainees) and recommendation by their supervisor is mandatory for award of the journeyman AFSC.
- 10.2.1.4. **Experience.** Qualification in and possession of AFSC 1A331. Also, experience operating and maintaining airborne communications, test, sensor, computer and electronic systems.
- 10.2.1.5. **Other.** See paragraph 10.1.1.4
- 10.2.2. **Training Sources.** Completion of 1A351 CDC, Airborne Mission Systems Journeyman, satisfies the knowledge and training requirements specified in the specialty qualification section (above) for award of the 5-skill level.
- 10.2.3. **Implementation.** Entry into journeyman upgrade is accomplished after the individual completes initial qualification training at their first duty location.

### 10.3. Craftsman Level Training:

- 10.3.1. Specialty Qualification.
- 10.3.1.1. **Knowledge.** In addition to knowledge required for the 5-skill level and other qualifications as listed above and individual must posses the knowledge and skills necessary to supervise personnel, and operate and maintain Airborne Mission Systems equipment.
- 10.3.1.2. **Education.** To assume the grades of SSgt and MSgt, individuals must be graduates of the Airman Leadership School (ALS) and the NCO Academy, respectively.
- 10.3.1.3. **Training.** Be at least a Staff Sergeant (SSgt), completion of 1A351 CDCs (or hold a 5-skill level in the AFSC), 12 months in UGT (6 months for retrainees) and recommendation by their supervisor is mandatory for award of the craftsman AFSC.
- 10.3.1.4. **Experience.** Qualification in and possession of AFSC 1A351. Also, experience and qualification in advanced operations and maintenance of aircraft mission systems.
- 10.3.1.5. **Other.** See paragraph 10.1.1.4.
- 10.3.2. Training Sources. The STS identifies all tasks required for qualification.
- 10.3.3. **Implementation.** Entry into 7-level upgrade is effective 1 Sep each year if an individual is selected for promotion to E-5. The only exception is STEP.

### 10.4. Superintendent Level Training:

- 10.4.1. Specialty Qualification.
- 10.4.1.1. **Knowledge.** In addition to knowledge required for the 7-skill level qualification, an individual must possess advanced skills and knowledge of concepts and principles in the effective management of Airborne Mission Systems equipment and personnel.
- 10.4.1.2. **Education.** Completion of the USAF Senior NCO Academy (or sister service equivalent) in-residence. Completion of a Community College of the Air Force (CCAF) Associate of Applied Science degree in this field is desirable.
- 10.4.1.3. **Training**. Must hold the rank of Senior Master Sergeant (SMSgt) and have supervisor's recommendation for award of the 9-skill level (active duty only).
- 10.4.1.4. **Experience.** Qualification in and possession of AFSC 1A371. Also, experience managing advanced operations and maintenance of aircraft mission systems.
- 10.4.1.5. **Other.** See paragraph 10.1.1.4.
- 10.4.2. Training Sources. USAF Senior NCO Academy (or sister service equivalent).
- 10.4.3. **Implementation**. Individual attains the rank of SMSgt, possesses the 7-skill level. Qualification training is initiated anytime an individual is assigned duties they are not qualified to perform.

### Section D - Resource Constraints

- 11. Purpose. This section identifies known resource constraints that preclude optimal/desired training from being developed or conducted, including information such as cost and manpower. Narrative explanations of each resource constraint and an impact statement describing what effect each constraint has on training are included. Also included in this section are actions required, office of primary responsibility, and target completion dates. Resource constraints will be reviewed and updated at least annually.
- **12. Apprentice Level Training.** JTIDS simulator/emulator and computer network simulator/emulator.
- 13. Journeyman Level Training. None identified.
- 14. Craftsman Level. None identified.

### **PART II**

# Section A - Specialty Training Standard (STS)

- **1. Implementation.** This STS will be used for technical training provided by AETC for classes beginning January 2008.
- 2. Purpose. As prescribed in AFI 36-2201, Volume 5, this STS:
- 2.1. Lists in column 1 of attachment 2, the tasks, knowledge, and technical references (TR) necessary for airmen to perform in the 3- and 5-skill level AFSC in the Airborne Mission Systems ladder of the Aircrew Operations Career Field. These are based on an analysis of the duties listed in AFI 36-2101.
- 2.2. Column 2 (3-Skill Level and 5-Skill Level) shows formal training and correspondence course requirements as described in the Education and Training Course Announcements (ETCA) web site at: <a href="https://etca.randolph.af.mil/">https://etca.randolph.af.mil/</a> and the career knowledge provided by the correspondence course. There is no advanced course. See AFIADL/AFSC/CDC listing maintained by the unit OJT manager for current CDC listings.
- 2.3. **Qualitative Requirements.** Attachment 1 contains the proficiency code key used to indicate the level of training and knowledge provided by resident training and career development courses.
- 2.4. Is a guide for development of promotion tests used in the Weighted Airmen Promotion System (WAPS). Specialty Knowledge Tests (SKTs) are developed at the USAF Occupational Measurement Squadron by senior NCOs with extensive practical experience in their career fields. The tests sample knowledge of STS subject matter areas judged by test development team members to be most appropriate for promotion to higher grades. Questions are based on study references listed in the WAPS study catalog. Individual responsibilities are in AFI 36-2605.
- **3. Recommendations**. Report unsatisfactory performance of individual course graduates to 37 TRG/DOS, 1220 Truemper Street, Suite 1, Lackland AFB TX 78236-5568. Please reference specific STS paragraphs.

### BY ORDER OF THE SECRETARY OF THE AIR FORCE

**OFFICIAL** 

CARROL H. CHANDLER, Lt Gen, USAF DCS, Operations, Plans & Requirements

- 2 Attachments:
- 1. Qualitative Requirements
- 2. STS: Airborne Mission System Specialty (1A3X1)

STS 1A3X1 1 November 2007

THIS BLOC	THIS BLOCK FOR IDENTIFICATION PURPOSES ONLY					
	NAME OF TRAINEE					
PRINTED NAME (Last, First Middle Initial)	RINTED NAME (Last, First Middle Initial)		SSAN			
PRINTED NAME	OF CERTIFYING OFFICIAL	AND WRITTEN INITIA	LS			
N/I	N/I					
N/I	N/I					
N/I	N/I					
N/I	N/I					
N/I	N/I					
N/I	N/I					

# QUALITATIVE REQUIREMENTS

		PROFICIENCY CODE KEY
	SCALE VALUE	DEFINITION: The Individual
	1	Can do simple parts of the task. Needs to be told or shown how to do most of the task. (EXTREMELY LIMITED)
TASK PERFORMANCE	2	Can do most parts of the task. Needs help only on hardest parts. (PARTIALLY PROFICIENT)
LEVELS	3	Can do all parts of the task. Needs only a spot check of completed work. (COMPETENT)
	4	Can do the complete task quickly and accurately. Can tell or show others how to do the task. (HIGHLY PROFICIENT)
	a	Can name parts, tools, and simple facts about the task. (NOMENCLATURE)
**TASK KNOWLEDGE	b	Can determine step by step procedures for doing the task. (PROCEDURES)
LEVELS	С	Can identify why and when the task must be done and why each step is needed. (OPERATING PRINCIPLES)
	d	Can predict, isolate, and resolve problems about the task. (ADVANCED THEORY)
	A	Can identify basic facts and terms about the subject. (FACTS)
***SUBJECT KNOWLEDGE	В	Can identify relationship of basic facts and state general principles about the subject. (PRINCIPLES)
LEVELS	С	Can analyze facts and principles and draw conclusions about the subject. (ANALYSIS)
	D	Can evaluate conditions and make proper decisions about the subject. (EVALUATION)

### **EXPLANATIONS**

- \*\* A task knowledge scale value may be used alone or with a task performance scale value to define a level of knowledge for a specific task. (Examples: b and 1b)
- \*\*\* A subject knowledge scale value is used alone to define a level of knowledge for a subject not directly related to any specific task, or for a subject common to several tasks.
- This mark is used alone instead of a scale value to show that no proficiency training is provided in the course or CDC.
- x This mark is used alone in course columns to show that training is required but not given due to limitations in resources.
- @ Taught by Aerospace Physiology during aircrew fundamentals.
- @@ This mark is used to show the five General Education requirements by CLEP/DANTES (pass or fail) towards CCAF degree.

Attachment 1

Users are responsible for annotating training references (TR) to identify current references pending STS revision

1. 2.						
	Proficiency codes are used to indicate training /informa					
TASKS, KNOWLEDGE AND TECHNICAL REFERENCES	A 3-SI Lev		B 5-Skill Level			
	Aircrew Fundamentals	AFSC Technical Principles	Aircrew Fundamentals CDC	AFSC Technical Principles CDC		
1. CAREER LADDER PROGRESSION TR: AFI 36-2101, AFI 36-2104, AFI 11- 401				92.0		
1.1. Progression within 1AXXX AFSC's	A		В			
1.2. Duties within 1AXXX AFSC's	A		В			
1.3. Total Force	A		В			
1.3.1. MAJCOM Missions	A		В			
1.4. Joint/Combined Service  2. SECURITY  TR: DODR 5200.1, AFI 10-1101, 31-	A		В			
201v2, 31-401, 33-208, 33-211, 10-701						
2.1. COMSEC relating to aircrew 2.1.1. Communications Security (COMSEC) Relating to AFSC 1A3XX	A		В			
2.1.1.1. Maintain crypto-logical materials TR: AFKAG-1		2b		В		
2.1.1.2. Security precautions involved in communications		A		В		
2.1.1.3. Inventory COMSEC kits		2b		-		
2.1.1.4. Two Person Integrity (TPI)		A		В		
2.1.1.5. Protect Sensitive/Classified Information and equipment TR: DOD 5200.1R		2b		В		
2.2. OPSEC relating to aircrew	A		В			
2.3. Perform Anti-Hijacking / Anti-Terrorism Procedures	1a					
2.4. Information Security relating to aircrew	A		В			
2.5. Physical Security relating to aircrew	A		В			
2.5.1. Perform flight line security procedures	1a					
2.6. Information Warfare     2.7. Computer Security (COMPUSEC) TR:		-		A		
AFSSI-5102, AFSSM-5019 & AFI 33-202		A		В		
3. CREW RESOURCE MANAGEMENT (CRM) TR: AFI-11-290						
3.1. Fundamentals	A		В			
3.2. Communication						
3.2.1. Terms and definitions	В		-			

1.	2.				
	Proficiency of	o indicate training /i	ing /information		
TASKS, KNOWLEDGE AND TECHNICAL REFERENCES	A 3-Sl- Lev	xill	B 5-Skill Level		
	Aircrew Fundamentals	AFSC Technical Principles	Aircrew Fundamentals CDC	AFSC Technical Principles CDC	
3.2.2. Radio discipline	A		-		
4. AVIATION SAFETY/AF OCCUPATIONAL SAFETY AND HEALTH (AFOSH) PROGRAM TR: AFI 91-201, 91-202, 91-301, 91-302, 91-303, 123-1, 32-7086, 24-204, AFOSH Std 91-25, 91-66, 91-100, AFPAM 91- 121					
4.1. Aviator hazards					
4.1.1. Engine air intake and exhaust	A		В		
4.1.1.1. Apply appropriate safety measures	1a		-		
4.1.2. High intensity sound	A		В		
4.1.2.1. Apply appropriate safety measures	1a		-		
4.1.3. Rotor/propeller planes of rotation	A		В		
4.1.3.1. Apply appropriate safety measures	1a		-		
4.1.4. Antenna radiation	A		В		
4.1.4.1. Apply appropriate safety measures	1a		-		
4.1.5. Aircraft electrical system	A	-	-	В	
4.1.5.1. Apply appropriate safety measures	1a		-		
4.1.6. Ground support equipment	A		В		
4.1.6.1. Apply appropriate safety measures	1a		-		
4.2. Weather	A		-		
4.3. Bird Avoidance Strike Hazard (BASH) Program	A		В		
4.4. Hazardous Materials (HAZMAT)	A		В		
4.5. Foreign Object Damage (FOD) Hazards/Prevention	A		В		
4.6. High intensity light (strobes)	A		В		
4.7. Test Equipment	**	2b	2	В	
4.8. Hand Tools		В		В	
4.9. Electrostatic Discharge				В	
5. PUBLICATIONS TR: AFI 11-215, 33-360, 37-160v1, T.O. 00-20, 00-5-1/2, DODR 4500-32v1, 11-202v2		A		D	
5.1. Air Force Technical Orders	В		В		

1.	Proficiency codes are used to indicate training /informati				
	provided				
TASKS, KNOWLEDGE AND TECHNICAL REFERENCES	A 3-Sl		B 5-Skill Level		
AND TECHNICAL REFERENCES	J-SI Lev				
	Aircrew Fundamentals	AFSC Technical Principles	Aircrew Fundamentals CDC	AFSC Technical Principles CDC	
5.1.1. Use T.O.s	2b		-		
5.1.2. Post Changes	2b		-		
5.2. Publications	В		В		
5.2.1. Use Publications	2b		-		
5.2.2. Post Changes	2b		-		
5.3. Flight Publication Improvement Reports 5.3.1. Complete flight publication improvement	В		В		
report (AF Form 847)	2b		-		
5.4. AFTO IMT 781 series	В		В		
5.4.1. Use AFTO IMT 781A	1a		-		
5.5. Flight Crew Information File (FCIF)	В		В		
5.5.1. Use Flight Crew Information File (FCIF) 5.6. Communications Act TR: ACPs 121/US Sup 2, 125, AFI 33-118 & AFMAN 33-120	2b	A	-	В	
5.7. ACPs TR: ACP 121, 125, 135		A		В	
5.8. Notices to Airmen (NOTAM) TR: AFI 11-208		-		В	
5.9. Flight Information Publication (FLIP) TR: Flight Information Publication (General planning), Flight Information Handbook, Enroute supplements, and Enroute charts		A		В	
5.10. OPTASKLINK TR: JCS Pub 3-56.23		_		A	
6. AIRCREW/FLIGHT MANAGEMENT TR: AFPD 11-4, AFI 11-401, 11-402, 11-412, 11-202v1/2/3, 38-201, 48-123v3					
6.1. Responsibilities of HQ USAF and MAJCOM Aircrew Managers	-		A		
6.2. Flight authorization	A		A		
6.3. Aviation Resource Management (ARM)					
6.3.1. Host Aviation Resource Management (HARM)	A		A		
6.3.2. Squadron Aviation Resource Management (SARM)	A		A		
6.4. Flight Records Folder (FRF)	A		A		
6.5. Aviation service, aeronautical ratings, badges	A		В		
6.6. Flight pay Career Enlisted Flyer Incentive Pay (CEFIP)/Gates	В		В		
6.7. Flight medicine					

TASKS, KNOWLEDGE AND TECHNICAL REFERENCES AND TECHNICAL REFERENCES  Aircrew Fundamentals Technical Fundamentals  AFSC Fundamentals Technical Fundamentals Fundamentals	1.			2.	
AND TECHNICAL REFERENCES		Proficiency codes are used to indicate training /informatio provided			information
Aircrew Fundamentals		A 3-Skill		B 5-Skill	
6.7.2 Grounding/Duties Not Including Flying (DNIF) Status		Aircrew	AFSC Technical	Aircrew Fundamentals	AFSC Technical Principles
DNIF) Status		В		В	
6.8.1. Crew rest  6.8.2. Restrictions  A  B  6.9. Security Clearances  7. AIRCREW TRAININGSUPERVISION TR: AFI 36-2201, 11-2MDS V1, 11- 207v1/2, AFI 36-2101, EDUCATION AND TRAINING ANNOUNCEMENTS (ETCA)  7.1. Physiological Training  @  -  7.2. General Education Requirements  @  7.3. Initial qualification training  A  B  7.4. Mission qualification training  A  B  7.5. Continuation training/Maintaining currency  A  B  7.6. Requalification training  A  B  7.7. Flight training records  A  B  7.9. Flight Evaluation Folder (FEF)  A  B  7.10. Life support equipment  A  A  B  B		В		В	
6.8.2. Restrictions  6.9. Security Clearances  7. AIRCREW TRAINING/SUPERVISION TR: AFI 36-2201, 11-2MDS VI, 11- 202v1/2, AFI 36-2101, EDUCATION AND TRAINING ANNOUNCEMENTS (ETCA)  7.1. Physiological Training  @ -  7.2. General Education Requirements  @ @ -  7.3. Initial qualification training  A B  7.4. Mission qualification training  A B  7.5. Continuation training/ Maintaining currency  A B  7.6. Requalification training  A B  7.7. Flight training records  A B  7.8. Standardization/Evaluation functions  A B  7.9. Flight Evaluation Folder (FEF)  A B  7.10. Life support equipment  A A C  A B	6.8. Aircrew member responsibilities				
6.9. Security Clearances 7. AIRCREW TRAINING/SUPERVISION TR: AFI 36-2201, 11-2MDS V1, 11- 202v1/2, AFI 36-2201, EDUCATION AND TRAINING ANNOUNCEMENTS (ETCA)  7.1. Physiological Training @ - 7.2. General Education Requirements @ @ - 7.3. Initial qualification training A B  7.4. Mission qualification training A B  7.5. Continuation training/Maintaining currency A B  7.6. Requalification training A B  7.7. Flight training records A B  7.8. Standardization/Evaluation functions A B  7.9. Flight Evaluation Folder (FEF) A B  7.10. Life support equipment A C  8. AERODYNAMICS TR: Aircraft -1 T.O., AFH 11-203v1, T.O. 1-1B-50  8.1. Fixed wing A C  8.2. Rotary wing A C  8.3. Aircraft general (Basic Construction) A  A C  A C  A C  A C  A C  A C  A C	6.8.1. Crew rest	A		В	
7. AIRCREW TRAINING/SUPERVISION TR: AFI 36-2201, 11-2MDS V1, 11- 202v1/2, AFI 36-2101, EDUCATION AND TRAINING ANNOUNCEMENTS (ETCA)  7.1. Physiological Training  @	6.8.2. Restrictions	A		В	
7. AIRCREW TRAINING/SUPERVISION TR: AFI 36-2201, 11-2MDS V1, 11- 202v1/2, AFI 36-2101, EDUCATION AND TRAINING ANNOUNCEMENTS (ETCA)	6.9. Security Clearances		-		A
7.2. General Education Requirements         @ @         -           7.3. Initial qualification training         A         B           7.4. Mission qualification training         A         B           7.5. Continuation training/ Maintaining currency         A         B           7.6. Requalification training         A         -           7.6. Requalification training         A         -           7.7. Flight training records         A         B           7.8. Standardization/Evaluation functions         A         B           7.9. Flight Evaluation Folder (FEF)         A         B           7.10. Life support equipment         A         -           8. AERODYNAMICS         TR: Aircraft -1 T.O., AFH 11-203v1, T.O. 1-1B-50         -           8.1. Fixed wing         A         -           8.2. Rotary wing         A         -           8.3. Aircraft general (Basic Construction)         A         -	7. AIRCREW TRAINING/SUPERVISION TR: AFI 36-2201, 11-2MDS V1, 11- 202v1/2, AFI 36-2101, EDUCATION AND TRAINING ANNOUNCEMENTS				
7.3. Initial qualification training  7.4. Mission qualification training  7.5. Continuation training/ Maintaining currency  A  B  7.6. Requalification training  A  B  7.7. Flight training records  A  B  7.8. Standardization/Evaluation functions  A  B  7.9. Flight Evaluation Folder (FEF)  A  B  7.10. Life support equipment  A  A  A  B  7.10. Life support equipment  A  A  B  A  B  7.10. 1-1B-50  A  B  8. AERODYNAMICS TR: Aircraft -1 T.O., AFH 11-203v1, T.O. 1-1B-50  A  8.1. Fixed wing  A  A  A  B  A  A  B  A  A  B  A  A  A	7.1. Physiological Training	@		-	
7.4. Mission qualification training 7.5. Continuation training/Maintaining currency A B 7.6. Requalification training A 7.7. Flight training records A B 7.8. Standardization/Evaluation functions A B 7.9. Flight Evaluation Folder (FEF) A B 7.10. Life support equipment A A B AERODYNAMICS TR: Aircraft -1 T.O., AFH 11-203v1, T.O. 1-1B-50  8.1. Fixed wing A - 8.2. Rotary wing A - 8.3. Aircraft general (Basic Construction) A B B C B C B B C C B B C C B B C C B C C B C C B C C B C C B C C B C C C B C C C C B C	7.2. General Education Requirements	@@		-	
7.5. Continuation training/ Maintaining currency  A  B  7.6. Requalification training  A  7.7. Flight training records  A  B  7.8. Standardization/Evaluation functions  A  B  7.9. Flight Evaluation Folder (FEF)  A  B  7.10. Life support equipment  A  A  A  B  7.10. Life support equipment  A  B  8. AERODYNAMICS  TR: Aircraft -1 T.O., AFH 11-203v1, T.O. 1-1B-50  8.1. Fixed wing  A  A  B  B	7.3. Initial qualification training	A		В	
currency  A  B  7.6. Requalification training  A  A  B  7.7. Flight training records  A  B  7.8. Standardization/Evaluation functions  A  B  7.9. Flight Evaluation Folder (FEF)  A  B  7.10. Life support equipment  A  A  A  A  B  7.10. Life support equipment  A  A  B  7.10. 1-1B-50  A  B  8.1. Fixed wing  A  A  A  B  A  A  B  A  A  B  A  A  B  A  B  A  B  A  B  A  B  A  B  A  B  A  B  A  B  A  B  A  B  A  B  A  B  A  B  A  B  A  B  A  B  A  B  B		A		В	
7.7. Flight training records  A  B  7.8. Standardization/Evaluation functions  A  B  7.9. Flight Evaluation Folder (FEF)  A  B  7.10. Life support equipment  A  A  A  A  B  7.10. Life support equipment  A  A  A  B  7.10. Life support equipment  A  A  A  B  7.10. Life support equipment  A  A  A  A  B  7.10. Life support equipment  A  A  A  A  B  A  A  B  A  A  B  A  A		A		В	
7.8. Standardization/Evaluation functions  A  B  7.9. Flight Evaluation Folder (FEF)  A  B  7.10. Life support equipment  A  A  8. AERODYNAMICS  TR: Aircraft -1 T.O., AFH 11-203v1,  T.O. 1-1B-50  8.1. Fixed wing  A  -  8.2. Rotary wing  A  -  8.3. Aircraft general (Basic Construction)  A  B  B  A  -  B  B  A  -  B  A  -  A  -  8.3. Aircraft general (Basic Construction)	7.6. Requalification training	A		-	
7.9. Flight Evaluation Folder (FEF)  A  B  7.10. Life support equipment  A  -  8. AERODYNAMICS  TR: Aircraft -1 T.O., AFH 11-203v1,  T.O. 1-1B-50  8.1. Fixed wing  A  -  8.2. Rotary wing  A  -  8.3. Aircraft general (Basic Construction)  A  -  -  -  -  -  -  -  -  -  -  -  -	7.7. Flight training records	A		В	
7.10. Life support equipment  8. AERODYNAMICS TR: Aircraft -1 T.O., AFH 11-203v1, T.O. 1-1B-50  8.1. Fixed wing  A  -  8.2. Rotary wing  A  -  8.3. Aircraft general (Basic Construction)  A  -	7.8. Standardization/Evaluation functions	A		В	
8. AERODYNAMICS         TR: Aircraft -1 T.O., AFH 11-203v1,         T.O. 1-1B-50         8.1. Fixed wing       A         8.2. Rotary wing       A         -         8.3. Aircraft general (Basic Construction)       A	7.9. Flight Evaluation Folder (FEF)	A		В	
TR: Aircraft -1 T.O., AFH 11-203v1,       -         T.O. 1-1B-50       A       -         8.1. Fixed wing       A       -         8.2. Rotary wing       A       -         8.3. Aircraft general (Basic Construction)       A       -	7.10. Life support equipment	A		-	
8.2. Rotary wing A -  8.3. Aircraft general (Basic Construction) A -	TR: Aircraft -1 T.O., AFH 11-203v1,				
8.3. Aircraft general (Basic Construction)  A	8.1. Fixed wing	A		-	
	8.2. Rotary wing	A		-	
8.4. Flight Controls A -	8.3. Aircraft general (Basic Construction)	A		-	
	8.4. Flight Controls	A		-	
8.5. Instruments A -	8.5. Instruments	A		-	
8.6. Aircraft Weight and Balance	8.6. Aircraft Weight and Balance				
8.6.1. Principles A -	8.6.1. Principles	A		-	
8.6.2. Apply weight and balance concepts 1a -	8.6.2. Apply weight and balance concepts	1a		-	

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	Proficiency of		o indicate training /i	information
TASKS, KNOWLEDGE AND TECHNICAL REFERENCES	A 3-Skill Level		B 5-Skill Level	
	Aircrew Fundamentals	AFSC Technical Principles	Aircrew Fundamentals CDC	AFSC Technical Principles CDC
8.6.3. Solve weight and balance math problems	1a		-	
9. AIRCREW ACTIVITIES TR: -1 T.O., -9 T.O, AFI 11-202, TR: AFI 10-707				
9.1. Mission briefings	A		-	
9.1.1. Mission Planning Documents	A		-	
9.1.2. Mission Planning		2b		-
9.1.3. Pre-mission		2b		-
9.1.4. Debrief		2b		-
9.2. Professional Equipment	A		A	
9.3. Perform egress procedures	1a		-	
9.4. Identify aircraft emergency equipment	1a		-	
9.5. Oxygen Requirements	A		A	
9.6. Joint Spectrum Interference Resolution (JSIR)/Air Force Spectrum Interference Resolution (AFSIR)	A		В	
9.7. Pre-flight		2b		-
9.8. In-flight		2b		-
9.9. Crew Coordination		2b		A
9.10. Post-flight		2b		-
9.11. Use Aircraft Wiring and Cabling Diagrams		2b		В
9.12. Maintain System Integrity				
9.12.1. Electromagnetic Interference (EMI) TR: MIL-E-6051D		A		В
9.12.2. Electromagnetic Compatibility (EMC) TR: MIL-E-6051D		A		В
9.12.3. Nuclear Effects on Mission Systems		A		В
9.12.4. EMSEC TR: NACSIM 5000		-		A
10. AIRCRAFT SYSTEMS/EQUIPMENT TR: Aircraft -1 T.O., MAJCOM guidance, and TO 00-25-172, AFI 11-202				
10.1. Electrical	A		-	
10.2. Hydraulic	A		-	
10.3. Environmental	A		-	

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	Proficiency codes are used to indicate training /inform provided			nformation
TASKS, KNOWLEDGE AND TECHNICAL REFERENCES	A 3-Skill Level		B 5-Skill Level	
	Aircrew Fundamentals	AFSC Technical Principles	Aircrew Fundamentals CDC	AFSC Technical Principles CDC
10.4. Communications	A		-	
10.5. Oxygen	A		-	
10.6. Fuel	A		-	
10.7. Concurrent servicing	A		-	
10.8. Fleet Service Equipment	A		-	
10.9. Engines	A		-	
10.10. Navigation lighting	A		-	
10.11. Pneumatic		-		A
10.12. Mission System Power Distribution		A		В
10.13. Mission Systems Cooling		A		В
11. COMMUNICATIONS				
11.1. Communication Agencies				
11.1.1. Federal Communications Commission TR: DOD Directive 4650-1		В		В
11.1.2. Federal Aviation Administration (FAA) TR: AFI 13-203 and FAAH 7110.65		В		В
11.1.3. Defense Information Systems Agency TR: DISA Circular 640-45-21		A		A
11.1.4. Defense Communications Systems (DCS) TR: DISA Circular 640-45-21		A		A
11.1.5. International Civil Aviation Organization TR: Flight Information Handbook		В		В
11.1.6. Air Traffic Control TR: AFI 13-203 and FAAH 7110.65		В		В
		<u> </u>		
11.2. Communications Networks 11.2.1. Aeronautical Radio Incorporated (ARINC) TR: Flight Information Handbook				
(FIH), Enroute Supplements 11.2.2. Mystic Star TR: DISA Circular 310-70-		В		В
79		В		В
11.2.3. Scope Command TR: FIH 11.2.4. Canadian Military Aeronautical		В		В
Communications Systems (MACS) TR: Canadian Enroute Supplements		A		A
11.3. Missions/Responsibilities on Major Weapons Systems TR: Applicable 11-2 Series/AFIs				
11.3.1. National Airborne Operations Center (NAOC)		A		A
11.3.2. Joint Surveillance Target Attack Radar System ( Joint STARS)		A		A

1.	Proficiency of	odes are used to	2.  o indicate training /	information
TASKS, KNOWLEDGE AND TECHNICAL REFERENCES	A 3-Skill Level		vided B 5-Skill Level	
	Aircrew Fundamentals	AFSC Technical Principles	Aircrew Fundamentals CDC	AFSC Technical Principles CDC
11.3.3. Airborne Warning and Control System (AWACS)		A		A
11.3.4. EC-130		A		A
11.3.5. Combat Rescue		A		A
11.3.6. Special Air Missions (SAM)		A		A
11.3.7. Special Operations		A		A
11.3.8. RC-135U/S/V/W/ & OC-135  12. ELECTRONIC WARFARE PRINCIPLES		A		A
12.1. Electronic Warfare categories 13. AIRBORNE SYSTEMS OPERATIONS AND MAINTENANCE TRs: Applicable T.O.s		A		В
13.1. General Requirements				
13.1.1. Visual Inspection		2b		-
13.1.2. Fault Isolation Techniques		2b		В
13.1.3. Remove and replace LRUs		2b		-
13.2. UHF/VHF Line of Sight Systems				
13.2.1. Theory of operation		В		В
13.2.2. Block diagram analysis		2b		В
13.2.3. Operate		2b		-
13.2.4. Isolate malfunctions		2b		-
13.3. HF Systems				
13.3.1. Theory of operation		В		В
13.3.2. Block diagram analysis		2b		В
13.3.4. Isolate malfunctions		2b		-
13.5. Audio Distribution Systems (Interphone System)				
13.5.1. Analog				
13.5.1.1. Theory of operation		В		В
13.5.1.2. Block diagram analysis		В		В
13.5.1.3. Operate		2b		-
13.5.2. Digital				
13.5.2.1. Theory of operation		В		В

1.	2. Proficiency codes are used to indicate training /information provided				
TASKS, KNOWLEDGE AND TECHNICAL REFERENCES	A 3-Skill Level		B 5-Skill Level		
	Aircrew Fundamentals	AFSC Technical Principles	Aircrew Fundamentals CDC	AFSC Technical Principles CDC	
13.5.2.2. Block diagram analysis		В		В	
13.5.2.3. Operate		2b		-	
13.6. Emergency Recorder/Locator System					
13.6.1. Theory of Operation		В		В	
13.7. Anti-Jam Systems TR: Have Quick Users/SINGARS Handbooks					
13.7.1. Theory of Operation		В		В	
13.7.3. Operate		2b		-	
13.8. Tactical Data Link Systems TR: JCS PUB					
13.8.1. TADIL A					
13.8.1.1. Theory of operation		-		A	
13.8.2. Joint Tactical Information Distribution System (JTIDS) TR: PE Report No. 93006					
13.8.2.1. Theory of operation		В		В	
13.8.2.2. Block diagram analysis		В		В	
13.8.2.3. Operate		1a		-	
13.9. Satellite Communications (SATCOM) Systems					
13.9.1 Architecture		В		В	
13.9.2 Military/Commercial SATCOM Systems					
13.9.2.1. Theory of operation		В		В	
13.9.2.2. Block diagram analysis		В		В	
13.10. Switching Systems					
13.10.1 Theory of Operation		В		В	
13.10.2. Operate		2b		-	
13.10.3. Isolate Malfunctions		2b		-	
13.11. Cryptologic Systems TR: Appropriate KAO's and (STU III/STE)					
13.11.1. Operate electronic transfer devices		2b		A	
13.11.2. Over-the-air re-keying equipment TR: NSAP NAG-16B/TSEC		A		A	
13.11.3. Voice					
13.11.3.1. Wide-Band Secure Systems					
13.11.3.1.1. Theory of operation		В		В	

1. 2. Proficiency codes are used to indicate training /inf				information	
	Proficiency codes are used to indicate training /information provided				
TASKS, KNOWLEDGE AND TECHNICAL REFERENCES	A 3-Skill		B 5 51		
AND TECHNICAL REFERENCES	J-SI		5-Sk Lev		
	Aircrew Fundamentals	AFSC Technical Principles	Aircrew Fundamentals CDC	AFSC Technical Principles CDC	
13.11.3.1.2. Operate		2b		-	
13.11.3.1.3. Isolate malfunctions		2b		-	
13.11.3.2. Narrow-Band Secure Systems					
13.11.3.2.1. Theory of operation		В		В	
13.11.3.2.2. Operate		2b		-	
13.11.3.2.3. Isolate malfunctions		2b		-	
13.11.4. Data					
13.11.4.1. Theory of operation		В		В	
13.11.4.2. Operate		2b		-	
13.11.4.3. Isolate malfunctions		2b		-	
13.13. Multiplex					
13.13.1. Theory of operation		-		A	
13.15. Self Defense Systems					
13.15.1. Theory of operation		-		A	
13.16. Radio Navigational Systems					
13.16.1. Automatic Direction Finding (ADF)					
13.16.1.1. Theory of operation		-		В	
13.16.2. VHF Omni-directional Range/VHF Omni-directional Range-Distance Measuring Equipment (VOR/VOR-DME)					
13.16.2.1. Theory of operation		-		В	
13.16.3. Instrument Landing System (ILS).					
13.16.3.1. Theory of operation		-		В	
13.16.4. Tactical Air Navigation (TACAN)					
13.16.4.1. Theory of operation		-		В	
13.16.5. Altimeters					
13.16.5.1. Theory of operation		-		В	
13.16.6. Global Positioning System (GPS)					
13.16.6.1. Theory of operation		A		В	
13.19. Inertial Navigation/Reference Systems (INS/IRS)					
		-			

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	Proficiency c		o indicate training /i vided	ning /information	
TASKS, KNOWLEDGE AND TECHNICAL REFERENCES	A 3-Skill Level		B 5-Skill Level		
	Aircrew Fundamentals	AFSC Technical Principles	Aircrew Fundamentals CDC	AFSC Technical Principles CDC	
13.19.1. Theory of operation				A	
13.20. Identification Friend or Foe (IFF)/Selective Identification Feature (SIF)					
13.20.1. Theory of operation		В		В	
13.20.2. Operate		2b		-	
13.20.3. Block Diagram Analysis		В		-	
13.18. Airborne Computer Systems					
13.18.1. Theory of operation					
13.18.1.1. Computer Operations		A		В	
13.18.1.1.1. Digital numbering System		A		В	
13.18.1.1.2. Data representation		A		В	
13.18.1.1.2.1. Bit/Byte		A		В	
13.18.1.1.3. Data Flow		A		В	
13.18.1.1.4. Memory Structure		A		В	
13.18.1.1.5. Interrupt requests		A		В	
13.18.1.1.6. Drivers		A		В	
13.18.1.2. Mainframe Computers		A		В	
13.18.1.3. Mini Computers		A		В	
13.18.1.4. Microcomputers		A		В	
13.18.1.4. Hardware					
13.18.1.4.1. Central Processing Unit (CPU)		A		В	
13.18.1.4.2. Computer Memory		A		В	
13.18.1.4.3. Input/Output		A		В	
13.18.1.4.3.1. Process		A		В	
13.18.1.4.3.1. 1. Controller		A		В	
13.18.1.4.3.1. 2. Buses		A		В	
13.18.1.4.3.2. Devices		A		В	
13.18.1.4.3.2. 1. Input/Output		A		В	
13.18.1.5. Software					
13.18.1.5.1. Operating Systems		A		В	
13.18.1.5.2. Graphical User Interfaces		A		В	

1.	2. Proficiency codes are used to indicate training /information provided				
TASKS, KNOWLEDGE AND TECHNICAL REFERENCES	A 3-Skill Level		B 5-Skill Level		
	Aircrew Fundamentals	AFSC Technical Principles	Aircrew Fundamentals CDC	AFSC Technical Principles CDC	
13.18.1.5.3. Application Software		A		В	
13.19. Network System Principles					
13.19.1. Theory of operation					
13.19.1.1. Types of Networks					
13.19.1.1.1. LAN		A		В	
13.19.1.1.2. MAN		A		В	
13.19.1.1.3. WAN		A		В	
13.19.1.2. Topologies					
13.19.1.2.1. Physical		A		В	
13.19.1.2.2. Logical		A		В	
13.19.1.3. Protocols					
13.19.1.3.1. OSI Model		В		В	
13.19.1.4. Standards					
13.19.1.4.1. Commercial		A		В	
13.19.1.4.2. Military		A		В	
13.19.1.4.3. International		A		В	
13.19.1.5. Concepts					
13.19.1.5.1. Data Network		A		В	
13.19.1.5. 1.1. Host-to-Host		A		В	
13.19.1.5. 1.2. Peer-to-Peer		A		В	
13.19.1.5. 1.3. Client/Server		A		В	
13.19.1.5.2. Signal Flow end to end		В		В	
13.19.1.6. Hardware					
13.19.1.6. 1. Terminal Equipment		A		В	
13.19.1.6. 2. Modems		A		В	
13.19.1.6. 3. Switching Devices		A		В	
13.19.1.6. 3.1. ATM		A		В	
13.19.1.6. 3.2. SONET		A		В	
13.19.1.6. 3.3. Ethernet		A		В	
13.19.1.6. 4. Hub Devices		A		В	

1.	Proficiency of	codes are used to	2.  o indicate training / vided	information
TASKS, KNOWLEDGE AND TECHNICAL REFERENCES	A 3-Skill Level		B 5-Skill Level	
	Aircrew Fundamentals	AFSC Technical Principles	Aircrew Fundamentals CDC	AFSC Technical Principles CDC
13.19.1.6. 5. Encryption or masking devices		A		В
13.19.1.6. 6. Multiplexers		A		В
13.19.1.6. 7. Packet assembler/disassembler		A		В
13.19.1.6. 8. Transceivers		A		В
13.19.1.6. 9. Network Interface Card (NIC)		A		В
13.19.1.6. 10. Bridges		A		В
13.19.1.6. 11. Repeaters		A		В
13.19.1.6. 12. Routers		A		В
13.19.1.6. 13. Gateway		A		В
13.19.1.7. Transition Medium		A		В
13.19.1.7.1. Radios		A		В
13.19.1.7.2. Satellite Systems		A		В
13.19.1.7. 3. Cable		A		В
13.19.1.7. 4. Connections		A		В
13.19.1.8. Broadband Technology		A		В
13.19.1.8.1. Defense Switched Network (DSN)		A		В
13.19.1.8.2. Defense Red Switch Network (DRSN)		A		В
13.19.1.8.3. Integrated Services Digital Network (ISDN)		A		В
13.19.1.8.4. Internet		A		В
13.19.1.8.5. NIPRNET		A		В
13.19.1.8.6. SIPRNET		A		В
13.19.1.8.7. Intranet		A		В
13.19.1.8.8. Defense Information System Network DISN		A		В
13.19.1.9. Performance Management		A		В
13.19.1.9.1. Monitor alarm and Fault indicator systems		2b		В
13.19.1.9.2. Evaluate Network Performance		2b		В
13.19.1.9.3. Evaluate Component Performance		2b		В
13.19.1.10. Fault Management		A		В
13.19.1.10.1. Troubleshoot		A		В
13.19.1.10.1.1. Hardware		2b		В

1.	Proficiency c	odes are used to	2.  o indicate training /	information
TASKS, KNOWLEDGE AND TECHNICAL REFERENCES	A 3-Skill Level		B 5-Skill Level	
	Aircrew Fundamentals	AFSC Technical Principles	Aircrew Fundamentals CDC	AFSC Technical Principles CDC
13.19.1.10.1.2. Software		2b		В
13.19.1.10.1.3. Media		2b		В
13.19.1.10.2. Restore		2b		В
13.19.1.10.3. Coordinate maintenance action		2b		В
13.20. Landline Interface Systems				
13.20.1. Theory of Operation		-		A
13.21. Collection Receiver Systems				
13.21.1 Theory of Operation		-		В
13.22. Surveillance Radar Systems				
13.22.1. Pulse Doppler				
13.22.1.1. Theory of operation		A		В
13.22.1.2. Block Diagram Analysis		A		В
13.22.2. Pulse				
13.22.2.1. Theory of operation		A		В
13.22.2.2. Block Diagram Analysis		A		В
13.22.3. Synthetic Aperture Radar (SAR)				
13.22.3.1. Theory of operation		A		В
13.22.3.2. Block Diagram Analysis  14. ELECTRONIC PRINCIPLES TR: T.O. 31-1-141 series		A		В
14.1. Metric notation TR: T.O.s 31-1-141-2, 31-1-141-5		В		В
14.2. Direct Current (DC) Principles		В		В
14.3. Alternating Current (AC) Principles		В		В
14.4. Basic Circuit Operation TR: T.O.s 31-1-141-2 & 31-1-141-9		В		В
14.5. Power Supply Principles TR: T.O.s 31-1-141-4-3, 31-1-141-4, 31-1-141-9 & 31-1-141-15		A		В
14.6. Voltage Regulator Principles TR: T.O.s 31-1-141-3 & 31-1-141-4				В
		A A		В
14.7. Filter Principles TR: T.O. 31-1-141-2 14.8. Digital Numbering Systems TR: T.O. 31-1-141-5				В
14.9. Digital to Analog / Analog to Digital Converter Principles TR: T.O. 31-1-141-13		2b A		В

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	Proficiency codes are used to indicate training /informati provided			information
TASKS, KNOWLEDGE AND TECHNICAL REFERENCES	A 3-Skill Level		B 5-Skill Level	
	Aircrew Fundamentals	AFSC Technical Principles	Aircrew Fundamentals CDC	AFSC Technical Principles CDC
14.10. Oscillator Principles TR: T.O.s 31-1-141-3, 31-1-141-10 & 31-1-141-11		A		В
14.11. Microphone/Speaker Principles TR: T.O. 31-1-141-3		A		В
14.12. Test Equipment TR: T.O.s 31-1-141-1, 31-1-141-7, 31-1-141-8 & 31-1-141-9				
14.12.1. Multi-meter		2b		В
14.12.2. Oscilloscope		2b		В
14.12.3. Built in Test Equipment/Diagnostics		1a		В
14.12.4. Signal Generator		2b		В
14.12.5. Spectrum analyzer 15. WAVE THEORY TR: AFMAN 33-120 AND T.O. 31-1-141 SERIES		2b		A
15.1. Propagation				
15.1.1. Concept of radio waves		A		В
15.1.2. Characteristics of wave travel				
15.1.2.1. Ground waves		A		В
15.1.2.2. Sky waves		A		В
15.1.2.3. Direct waves		A		В
15.1.3. Frequency wave length relationship		A		В
15.1.4. Divisions of frequency bands		A		В
15.1.5. Anomalous Propagation (AP)		A		В
15.2. RF Modulation Principles				
15.2.1. Amplitude Modulation (AM)		В		В
15.2.2. Continuous Wave (CW)		В		В
15.2.3. Single Side-Band		В		В
15.2.4. Frequency Shift Keying (FSK)		В		В
15.2.5. Frequency Modulation (FM)		В		В
15.2.6. Pulse Modulation/Radio Detection and Ranging (RADAR)		A		В
15.3. Multiple Access Techniques				
15.3.1. Time Division Multiplexing (TDM)/Time Division Multiple Access (TDMA)		A		В
15.3.2. Frequency Hopping		A		В

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	Proficiency codes are used to indicate training /in provided			information
TASKS, KNOWLEDGE AND TECHNICAL REFERENCES	A 3-Skill Level		B 5-Skill Level	
	Aircrew Fundamentals	AFSC Technical Principles	Aircrew Fundamentals CDC	AFSC Technical Principles CDC
15.3.3. Frequency Division Multiplexing (FDM)		A		В
15.3.4. Demand Assignment Multiple Access (DAMA)		A		В
15.4. Transmitter Operation TR: T.O.s 31-1-141-4, 31-1-141-9 & 31-1-141-13				
15.4.1. Communications				
15.4.1.1. Amplitude Modulation (AM)		A		В
15.4.1.2. Frequency Modulation (FM)		A		В
15.4.1.3. Single Side Band (SSB)		A		В
15.4.1.4. Pulse Modulation (PM)		A		В
15.4.2. Radar 15.5. Receiver Operation TR: T.O.s 31-1-141-4, 31-1-141-9 & 31-1-141-13		A		В
15.5.1. Communications				
15.5.1.1. Amplitude Modulation (AM)		A		В
15.5.1.2. Frequency Modulation (FM)		A		В
15.5.1.3. Single Side Band (SSB)		A		В
15.5.1.4. Pulse Modulation (PM)		A		В
15.5.1.5. Audio		A		В
15.5.1.6. Intermediate frequency (IF)		A		В
15.5.1.7. Video		A		В
15.5.2. Radar		A		В
15.6. Aircraft Antenna Operations TR: T.O. 31-1-141-12		В		В
16. TRANSMITTING AND RECEIVING SKILLS				
16.1. Transcribe Voice Transmissions by Hand TR: ACP 121/US Sup 2*		1a		-
16.2. Use Prescribed Procedures for: TR: ACP 121/US SUP 2, 124, 125, and 131*		- 11		
16.2.1. Operating signals		1a		В
16.2.2. Prosigns TR: ICAO Annex 10		1a		В
16.2.3. Handprinting techniques		1a		A
16.2.5. Log keeping		1a		A
16.2.6. Phonetic alphabet TR: ICAO Annex 10, FIH		2b		A

1.			2.		
	Proficiency codes are used to indicate training /information provided				
TASKS, KNOWLEDGE AND TECHNICAL REFERENCES	A 3-Skill Level		B 5-Skill Level		
	Aircrew Fundamentals	AFSC Technical Principles	Aircrew Fundamentals CDC	AFSC Technical Principles CDC	
16.2.7. Prowords		2b		A	
16.2.8. Coordinated Universal Time (UTC) TR: FLIPs		2b		A	
16.2.9. Microphone techniques		2b		В	
16.2.10. Signal checks		2b		В	
16.2.11. Calling and answering		2b		В	
16.2.12. Phone patches TR: FIH		2b		В	
16.2.13. Net Control TR: ACP 125					
16.2.13.1. Voice					
16.2.13.1.1. Circuit discipline		2b		В	
16.2.13.1.2. Authentication		2b		В	
16.2.13.1.3. Brevity Codes		2b		В	
16.2.13.2. Data					
16.2.13.2.1. Satellite		-		A	
16.2.13.2.2. Air to Air /Air to Ground		-		A	
16.2.14. Weather reports TR: FLIPs					
16.2.14.1. Copy (format)		2b		В	
16.2.14.2. Pilot Report (PIREP)		-		A	
16.2.15. Emergency communications TR: FIH		2b		В	
16.2.16. Air Traffic Control (ATC) TR FLIPs					
16.2.16.1. Clearances		2b		В	
16.2.16.2. Position reports		2b		В	
16.2.16.3. Departure/Arrival Report		2b		В	

- **4. Measurement.** Each objective is indicated as follows: **W** indicates task or subject knowledge which is measured using a written test, **PC** indicates required task performance which is measured with a performance progress check, and **PC/W** indicates separate measurement of both knowledge and performance elements using a written test and a performance progress check. **P** indicates performance test only.
- **5. Standard.** The standard is 85% on written examinations. Standards for performance measurement are indicated in the objective and delineated on the individual progress checklist. Instructor assistance is provided as needed during the progress check, and students may be required to repeat all or part of the behavior until satisfactory performance is attained.
- **6. Proficiency Level.** Most task performance is taught to the "2b" proficiency level which means the students can do most parts of the task, but does need assistance on the hardest parts of the task (partially proficient). The student can also determine step-by-step procedures for doing the task.
- 7. Course Objective. These objectives are listed in the sequence taught by Block of Instruction.
- 7.1. Initial Skills Course:
- 7.1.1. Block 1 AMSS Familiarization
- 7.1.2. Block 2 Basic Electronic Principles
- 7.1.3. Block 3 Advanced Electronic Principles
- 7.1.4. Block 4 Communications Principles
- 7.1.5. Block 5 RADAR and Electronic Warfare Principles
- 7.1.6. Block 6 Advanced Communications Principles
- 7.1.7. Block 7 Computer Principles
- 7.1.8. Block 8 In-Flight Maintenance Operations
- 7.1.9. Block 9 Communications Agencies/Security
- 7.1.10. Block 10 Communications Operations Principles
- 7.2. Advanced Skills Course:

**NOTE**: There is currently no advanced course. This area is reserved.

### Section C - Support Material

**8.** The following list of support materials is not all-inclusive; however, it covers the most frequently referenced areas.

**NOTE:** This area is reserved.

### Section D - Training Course Index

**9**. **Purpose.** This section of the CFETP identifies training courses available for the specialty and shows how the courses are used by each MAJCOM in their career field training programs.

#### 10. Air Force In-Residence Courses.

COURSE NUMBER	COURSE TITLE	LOCATION
L3AQR1A311 01AB	Aircrew Fundamentals Course – Airborne Mission Systems	Lackland AFB
L3ABR1A331 048B	Airborne Mission Systems Apprentice Course	Lackland AFB
S-V80-A	Combat Survival Training	Fairchild AFB
S-V83-A	Special Survival	Fairchild AFB
S-V86-A	Water Survival Training (Parachuting)	Pensacola NAS
S-V90-A	Water Survival Training (Non-Parachuting)	Fairchild AFB

### 11. Air Force Institute for Advanced Distributed Learning (AFIADL) Courses.

COURSE NUMBER	COURSE TITLE
CDC 1AX5X	Aircrew Fundamentals
CDC 1A351	Airborne Mission Systems Specialty Journeyman

### Section E - MAJCOM Unique Requirements

The following list of MAJCOM unique requirements is not all-inclusive; however, it covers the most frequently referenced areas.

#### 12. Air Combat Command Courses.

COURSE NUMBER	COURSE TITLE	LOCATION
ACCAIC100	ACC ACADEMIC INSTRUCTOR COURSE	ALL ACC FORMAL SCHOOLS
E3BQACS-O	E-3 COMMUNICATIONS SYSTEMS OPERATOR INITIAL QUALIFICATION TRAINING COURSE	TINKER AFB, OK
E3BQACS-T	E-3 COMMUNICATIONS TECHNICIAN	TINKER AFB, OK
E3BQCDMT	E-3 COMPUTER DISPLAY MAINTENANCE TECHNICIAN INITIAL QUALIFICATION TRAINING COURSE	TINKER AFB, OK
E3BQART	E-3 AIRBORNE RADAR TECHNICIAN INITIAL QUALIFICATION TRAINING COURSE	TINKER AFB, OK
E4B00MQERO-001	E-4B AIRBORNE COMMUNICATIONS SPECIALIST SEMI- AUTOMATIC SWITCHING SYSTEM	OFFUTT AFB, NE
E4B00MQERO-003	E-4B AIRBORNE COMMUNICATIONS SPECIALIST DATA-B SYSTEMS	OFFUTT AFB, NE
E4B00MQERO-004	E-4B AIRBORNE COMMUNICATIONS SPECIALIST RADIO SYSTEMS	OFFUTT AFB, NE
E3AZR3C151-004	MILSTAR COMMAND POST TERMINAL OPERATOR	FORT GORDON, GA
RC135ASE	RC-135 AIRBORNE SYSTEMS ENGINEER COMMON CORE CLASS	OFFUTT AFB, NE
RC135VASE-1	RC-135V/W RIVET JOINT AIRBORNE SYSTEMS ENGINEER #1 INITIAL QUALIFICATION	OFFUTT AFB, NE
RC135VASE-2	RC-135V/W RIVET JOINT AIRBORNE SYSTEMS ENGINEER #2 INITIAL QUALIFICATION	OFFUTT AFB, NE

RC135VASE-3	RC-135V/W RIVET JOINT AIRBORNE SYSTEMS ENGINEER #3 INITIAL QUALIFICATION	OFFUTT AFB, NE
RC135VASE-4	RC-135V/W RIVET JOINT AIRBORNE SYSTEMS ENGINEER #4 INITIAL QUALIFICATION	OFFUTT AFB, NE
RC135UASE-1	RC-135U COMBAT SENT AIRBORNE SYSTEMS ENGINEER #1	OFFUTT AFB, NE
RC135UASE-2	RC-135U COMBAT SENT AIRBORNE SYSTEMS ENGINEER #2 QUALIFICATION	OFFUTT AFB, NE
RC135SASE-2	RC-135S COBRA BALL AIRBORNE SYSTEMS ENGINEER #2 QUALIFICATION	OFFUTT AFB, NE
CCALL30 AMTIQ	COMPASS CALL AIRBORNE MAINTENANCE TECHNICIAN	DAVIS MONTHAN AFB, AZ
CCALL35 AMTIQ	COMPASS CALL AIRBORNE MAINTENANCE TECHNICIAN	DAVIS MONTHAN AFB, AZ
E8CST	COMMUNICATIONS SYSTEMS TECHNICIAN	ROBINS AFB, GA
E8AMSS	E-8 AMSS QUALIFICATION TRAINING	ROBINS AFB, GA

# 13. Air Education and Training Command Courses.

COURSE NUMBER	COURSE TITLE	LOCATION
MC130PCSOMQSO	MC130P COMMUNICATIONS SYSTEMS OPERATOR	KIRTLAND AFB, NM
MC130PCSOMQR	HC130 COMMUNICATIONS SYSTEMS OPERATOR	KIRTLAND AFB, NM
MC130PCSOSR	MC/HC130 COMMUNICATIONS SYSTEMS OPERATOR SIMULATOR REFRESHER	KIRTLAND AFB, NM
HC130-MK-IQ	HC-130 MISSION COMMUNICATIONS ELECTRONIC SPECIALIST INITIAL QUALIFICATION	KIRTLAND AFB, NM
MC130P-MK-IQ	MC-130P MISSION COMMUNICATIONS ELECTRONIC SPECIALIST INITIAL QUALIFICATION	KIRTLAND AFB, NM
AFSOC 155000	INTRODUCTION TO SPECIAL OPERATIONS (ISOC)	HURLBURT FIELD, FL
MC130ECSO	COMMUNICATIONS SPECIALISTS COMBAT TALON 1	HURLBURT FIELD, FL

## 14. Air National Guard Courses.

COURSE NUMBER	COURSE TITLE	LOCATION
EC130JMK-ICQ	ELECTRONIC COMMUNICATION SYSTEMS OPERATOR COURSE	HARRISBURG, PA
EC130JMK-1	NARROWBAND AND WIDEBAND QUALIFICATION COURSE	HARRISBURG, PA
EC130JMK-2	TRAILING WIRE MF/HF QUALIFICATION COURSE	HARRISBURG, PA
EC130JMK-3	PROGRAM TECHNICIAN UPGRADE COURSE	HARRISBURG, PA
YTEC AIC	ANG ACADEMIC INSTRUCTOR COURSE	MCGHEE TYSON ANGB, TN